

Guide to Accommodations for Computer-Based FCAT, FCAT 2.0, and EOC Assessments

Bureau of Exceptional Education and Student Services
Florida Department of Education
Revised, Spring 2012

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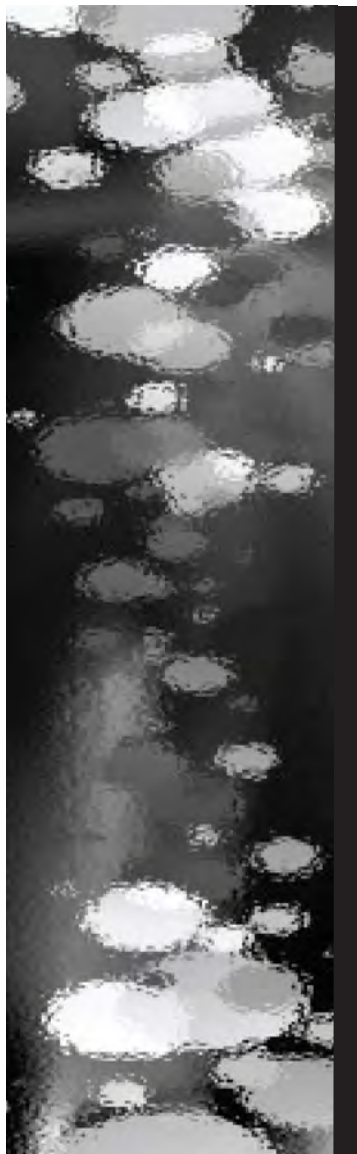
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Guide to Accommodations for Computer-Based FCAT, FCAT 2.0, and EOC Assessments

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Bureau of Exceptional Education and Student Services
Florida Department of Education
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Introduction

This manual is provided as a supplement to the *Guide to FCAT and FCAT 2.0 Accommodations for Students with Disabilities* published by the Florida Department of Education (FDOE) in 2010. The content is primarily derived from information in the following publications:

- *Spring 2012 End-of-Course Test Administration Manual*
- *Spring 2012 Reading & Mathematics Retake, Grades 6 & 10 Reading Computer-Based Test Administration Manual*

This document is written to assist school district personnel and parents when making decisions about the use of accommodations by students with disabilities on statewide computer-based assessments.

The first section includes a description of computer-based tests, including the types of items, expected responses, and session length. It also includes an explanation of the embedded electronic tools available for all students that are incorporated in the test system.

The second section presents an explanation of four types of accommodations and descriptions of accommodations under each category. Specific information is included about the use of accommodated computer-based test (CBT) forms and paper-based accommodations. In addition, information is provided about other accommodations, including accommodations for students who are English Language Learners (ELLs).

The third section includes a step-by-step process to assist the team when making decisions for individual students with disabilities.

Section One

Computer-Based Tests in Florida

Beginning with the 2010–11 school year, Florida’s statewide assessment programs began the transition to assessing student understanding of the Next Generation Sunshine State Standards through the implementation of the Florida Comprehensive Assessment Test® 2.0 (FCAT 2.0) and Florida End-of-Course (EOC) assessments. Students in selected grades and subjects will continue to participate in FCAT assessments, which measure student achievement of the Sunshine State Standards, until the transition is complete.

In 2010, changes enacted by the Florida Legislature affected graduation requirements and the statewide testing program for students entering grade 9 in the 2010–11 school year. End-of-Course assessments will be phased in for selected high school courses, beginning with Algebra 1 in 2010–11, adding Geometry and Biology 1 in 2011–12, followed by U.S. History and Civics. Students enrolled in these courses or their equivalents will be required to take the EOC assessment to earn credit for the course. The first year the EOC is administered, the assessment will count for 30 percent of the student’s final grade. After the first year, a passing score will be established by the State. Contingent on funding, other EOC assessments will be added in subsequent years for courses.

FCAT 2.0 Reading will be administered to students in grades 3–10, and FCAT 2.0 Mathematics will be administered to students in grades 3–8. Grade 10 FCAT Mathematics will be discontinued in 2011–12, except for students who have not met required performance expectations for graduation. FCAT Writing will be given three times, once each in elementary, middle, and high school. FCAT 2.0 Science will be administered to students in grades 5 and 8. In 2011–12, the Biology 1 EOC assessment will be required and the Grade 11 FCAT Science will be discontinued, per section 1008.22 (3)(c)1. and 2.a (II), Florida Statutes (F.S.).

Guide to Accommodations for Computer-Based FCAT, FCAT 2.0, and EOC Assessments

The following chart provides a summary of changes:

Assessment	Required Administration	To Be Discontinued
FCAT 2.0 Reading	Grades 3–10	
FCAT Reading Retake	Retake through 2011–12	
FCAT 2.0 Reading Retake	Beginning 2011–12	
FCAT 2.0 Mathematics	Grades 3–8	
FCAT Mathematics	Grade 10 Retake through 2012–13	2011–12: Grade 10
FCAT Writing	Grades 4, 8, and 10	
FCAT 2.0 Science	Grades 5 and 8 beginning 2011–12	
FCAT Science	Grades 5, 8, and 11	2011–12: Grades 5, 8, and 11
Algebra 1 EOC	Upon course completion beginning 2010–11	
Geometry EOC	Upon course completion beginning 2011–12	
Biology 1 EOC	Upon course completion beginning 2011–12	
U.S. History EOC	Upon course completion beginning 2012–13	
Civics EOC	Upon course completion beginning 2013–14	

Students with disabilities who have an individual educational plan (IEP) may request a waiver of the results of the FCAT/FCAT 2.0 as a requirement for graduation with a standard high school diploma if their IEP team determines that the students' abilities cannot be accurately measured by the statewide assessment. The IEP team must meet to determine whether the FCAT/FCAT 2.0 can accurately measure the student's abilities,

taking into consideration allowable accommodations. Students with disabilities with Section 504 plans are not eligible for a waiver of the results from the FCAT/FCAT 2.0 (s. 1003.428(8), F.S.; FDOE, 2010, March 12).

Students with disabilities who have IEPs may also request a waiver of the use of EOC assessment results as 30 percent of the course grade or as a requirement for credit if the IEP team determines that an EOC assessment cannot accurately measure the student's abilities, taking into consideration all allowable accommodations. The IEP team will follow a procedure similar to the one used for the FCAT waiver to request a waiver of the EOC assessment results. Only students with disabilities with IEPs are eligible for a waiver (s. 1003.428(8)(b)2., F.S.).

Computer-Based Tests

Florida has implemented Pearson's TestNav 6.9 computer-based platform, which requires the download of an application. Accommodated CBT forms are provided in TestHear, a CBT platform modeled after TestNav 6.9. TestHear operates on the Windows PC workstations and on Mac workstations that can run Windows and Mac OS 10.5 or later (e.g., via Boot Camp).

In 2011–12, the following tests are delivered via the CBT platform: Grades 6 and 10 FCAT 2.0 Reading, FCAT Mathematics Retake, FCAT Reading Retake, FCAT 2.0 Reading Retake, Algebra 1 EOC, Geometry EOC, Biology 1 EOC, and U.S. History EOC.

In subsequent years, additional FCAT 2.0 assessments and Common Core assessments in English/Language Arts and Mathematics will be administered using a computer-based platform (FDOE, 2011, July 22).

For these CBT administrations, paper-based test materials are available as accommodations. In order to receive paper-based test materials for any CBT administration, a paper-based testing requirement or one or more of the conditions listed should be indicated on the student's IEP or Section 504 plan.

- The student cannot access assessments on the computer
- The student requires an accommodation that cannot be implemented in conjunction with a computer-based administration (e.g., the student requires a specialized setting or uses adaptive furniture that cannot accommodate a computer workstation)
- The student requires an accommodated CBT form that is not available
- The student has a flexible scheduling/extended time accommodation that requires testing one session over more than one day
- The student is hospitalized/homebound

Paper-based accommodations are not typically provided for field tests.

Grades 6 and 10 FCAT 2.0 Reading

FCAT 2.0 Reading tests for Grades 6 and 10 will be administered in computer-based formats. Both tests will have two sessions (FDOE, 2011, February).

Paper-based test materials (regular print and braille) can be provided to eligible students whose IEPs or Section 504 plans indicate the accommodation.

FCAT Reading Retake

The FCAT Reading Retake is offered in both paper-based and computer-based formats through the 2011–12 school year. Districts select the delivery mode for each school. The test includes informational and literary reading passages with sets of multiple-choice items. The test session is untimed, but students must finish within one school day.

For schools participating in the computer-based Reading Retake administration, paper-based test materials (regular print, braille, and Reading Passage Booklets) can be provided to eligible students whose IEPs or Section 504 plans indicate the accommodation.

FCAT 2.0 Reading Retake

Beginning in the 2011–12 school year, the FCAT 2.0 Reading Retake will be computer-based only, with paper versions for students whose IEPs indicate this accommodation. Students are required to complete the FCAT 2.0 Reading Retake over two days. Students are not permitted to return to Session 1 items on the second day of testing.

Paper-based test materials (regular print and braille) can be provided to eligible students whose IEPs or Section 504 plans indicate the accommodation.

FCAT Mathematics Retake

FCAT Mathematics Retake is a computer-based test that includes multiple-choice and gridded-response items. The test session is untimed, but students must finish within one school day.

Paper-based test materials (regular print and braille) can be provided to eligible students whose IEPs or Section 504 plans indicate the accommodation.

Algebra 1 EOC

The Algebra 1 EOC assessment includes multiple-choice and fill-in response items. For fill-in response items, students must type digits (zero through nine) or symbols (forward slash/fraction bar, decimal point, and negative sign) in the response boxes. The Algebra 1 EOC assessment will be administered in two 80-minute sessions, with a 10-minute break between the two sessions. While there are two scheduled sessions for timing purposes, there are not two separate sections of the test; at the 10-minute break, students will stop wherever they are in the test and resume at that point after the break. Students who are not finished by the end of the second 80-minute session may continue working, but testing must be completed within the same school day.

Paper-based test materials (regular print and braille) can be provided to eligible students whose IEPs or Section 504 plans indicate the accommodation.

Geometry and Biology 1 EOC

The Geometry EOC assessment includes multiple-choice and fill-in response items and is administered in one 90-minute session. The Biology 1 EOC assessment includes multiple-choice items only. Biology 1 is administered in one 75-minute session.

Paper-based test materials (regular print and braille) can be provided to eligible students whose IEPs or Section 504 plans indicate the accommodation.

CBT Student Tools

The TestNav 6.9 and TestHear computer-based testing platforms provide online tools for students to use as they work through the test items. Instructions and practice using the tools during practice sessions are available prior to the test administration. The following tools are available to all students:

Selection Tool

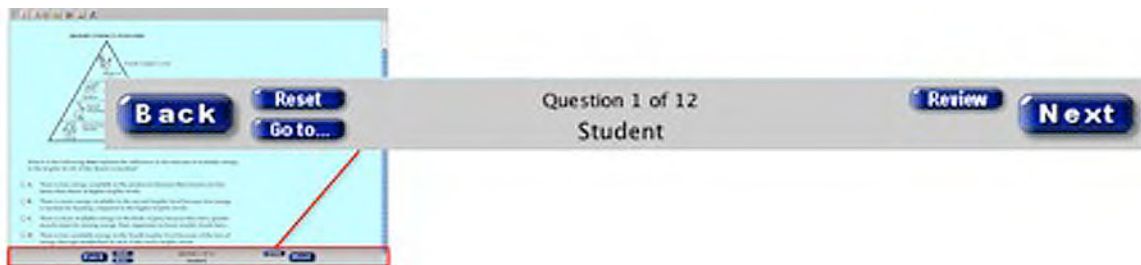
The selection tool is the default tool that students use to respond to questions. Any time students need to turn off another tool, they can click the icon for that tool again or click the selection tool.

Back/Next

As a passage or question is displayed on the screen, students click on the **Next** button at the bottom right of the screen to move to the next question or passage. The **Next** button is only available once students reach the end of a question or passage. The **Back** button is used to move to a previous question or passage. Student responses are automatically saved as they move from question to question. Students can change their responses at any time before submitting the test.

Reset

The **Reset** button removes the answer that was selected or filled in in grids or response boxes and allows the student to answer the question again.



Navigation Buttons

Go To

The **Go To** button takes students to a summary screen, which shows the question number, whether a question has been answered, and whether a question has been flagged for review. Questions are marked as Not Required, Answered, or Not Answered. Students can go to any question by clicking on the question number. Reading passages are also indicated on this screen.

Review

The **Review** button allows students to flag questions that they may want to review at a later time. At any time, students can go back to the questions that they flagged for review. Students can also access the questions marked for review on the summary screen by clicking the **Go To** button.

Highlighter

Students use the **Highlighter** tool to mark words, phrases, and graphics in a reading passage or test item.

Eliminate Choice

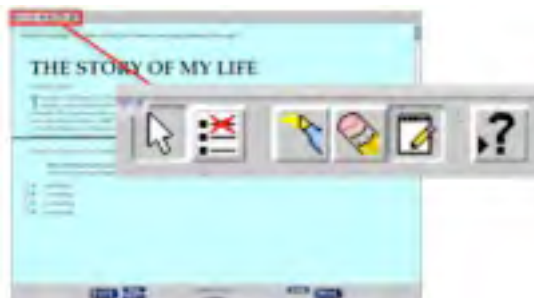
Students can use the **Eliminate Choice** tool to cross out answer choices that they have eliminated as possible correct answers. Students can put an X through an answer choice by clicking anywhere on an answer choice. Students can turn off the eliminator by clicking it again. To select an answer that they have eliminated, students remove the X by clicking the answer choice. A pop-up window will ask if students want the choice to be their answer. Students can also remove the X with the eraser tool.

Eraser

Students use the **Eraser** tool to remove highlighting and to erase an X from an eliminated choice.

Help

The **Help** tool provides an explanation of the available online tools.



TestNav Toolbar for FCAT Reading Retake

Test-Specific CBT Student Tools

The following tools are available for specific assessments based on what students need to complete the tasks required by the test items.

Notepad

Students use the **Notepad** to make notes on a particular item for later reference. The notes stay with the item. The notepad is available only on the reading tests.

Straightedge

The **Straightedge** looks like a ruler but has no measuring units. Students use the straightedge just like the edge of a piece of paper to help work problems. Students can slide and rotate the straightedge clockwise and counterclockwise as needed. The straightedge is available on mathematics and science tests.

Calculator

A built-in, four-function **calculator** (TI-108) is provided on FCAT Mathematics Retake, Algebra 1 EOC, and Biology 1 EOC. If requested, students may use handheld four-function calculators, including large display and talking versions that were provided by the FDOE.

For the Geometry EOC, a built-in scientific calculator (TI-30SX) is provided. If requested, students may use FDOE-approved handheld scientific calculators, including large display and talking versions. The approved list of scientific calculators is shown on the next page. No handheld scientific calculators will be provided by the FDOE.



Texas Instruments	Casio	Sharp	Hewlett-Packard	Others
TI-30XS Multi-View (Online calculator for the computer-based Geometry EOC assessment) TI-30X IIS (solar) TI-36X Solar TI-30Xa TI-34 Multi-View TI-36X II	FX-300ES FX-260 Solar	EL-531WH EL-509W/531W EL-503W EL-510R	HP 10s	Calculators with similar functions may be approved by the FDOE

Scientific Calculators Approved for the Geometry EOC Assessment

Graphing calculators, calculators with qwerty keyboards, WriteView (Sharp) calculators, and calculators with solve functions are **not** allowed on the Geometry EOC assessment. Any large-print/large-display scientific calculator should be comparable in function to the approved calculators listed above. The approved talking scientific calculator is the Orion TI-36X Talking Scientific Calculator or one that is comparable in function to the Orion TI-36X.

Exhibit

The **Exhibit** tool allows students to view a pop-up window that includes the reference sheet and instructions (e.g., Directions for Completing the Response Grids, Helpful Hints for Using a Four-Function Calculator) that are specific to each test. During testing, students may leave the Exhibit window open while answering test items. Students may also open and use the built-in calculator with the Exhibit window open. Schools will have the option of providing a paper version of the reference sheet to any student.



TestNav Toolbar for Mathematics and Science Tests

CBT Work Folder

A CBT Work Folder contains sheets of 11x17 yellow paper folded in half. The Work Folder has graph paper printed on the back cover. Each student who takes a computer-based mathematics or science test is allowed to have a CBT Work Folder to work the problems. One CBT Work Folder should be sufficient for each student; however, students may request additional folders.

TestHear Tools for CBT Accommodated Forms



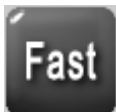




In addition to the CBT student tools described on the previous pages, TestHear accommodated CBT forms (e.g., large print font, color contrast, zoom, screen reader) also provide accessibility and navigation tools that are specific to the particular accommodations permitted on the student's test. An assistive device form allows the use of computer-based assistive devices without other accommodated CBT form tools enabled.

Flip Button

The toolbar at the top of the TestHear software screen flips between Test Tools and Accessibility Tools when you click on the flip button in the top right corner. The flip button looks like:












**Accessibility Tools**






The Accessibility Tools change how the test looks or sounds.

Operation	Using Buttons	Keyboard Shortcuts	Applicable Accommodated Form
Adjust color combinations for font and background (color contrast), cursor size (zoom), and volume/rate of computer voice (screen reader).		Ctrl+M	Color Contrast Screen Reader Zoom
Read slower.		Ctrl+PageUp Ctrl+Alt+PageUp	Screen Reader
Read faster.		Ctrl+PageDown Ctrl+Alt+PageDown	Screen Reader
Make the print appear smaller.		Ctrl+Minus	Zoom
Make the print appear larger.		Ctrl+Plus	Zoom
Change the colors on the screen. (Displays the color combination selected using the Customize button.)		F3	Color Contrast
Allow you to move the text by holding down the left button of the mouse. Turn off pan before answering any questions.		F4	Color Contrast Large Print Screen Reader Zoom Assistive Devices

Navigation Tools

The Navigation Tools are used to read the test or move to different parts of the test. The Click Navigate tool is located at the top of the TestHear software screen. The remaining Navigation tools are located along the bottom of the TestHear software screen. Unless otherwise indicated, these tools are available for all accommodated forms and subject areas.

Operation	Using Buttons	Keyboard Shortcuts
Click on any text on the screen to read or move to that part of the test.		F12
Start or stop reading. (Only enabled on Screen Reader forms.)	 	Spacebar
Move to the previous sentence.		Left arrow
Move to the next sentence.		Right arrow
Move to the previous paragraph.		Up arrow
Move to the next paragraph.		Down arrow
Move to the reading passage. (Only enabled on Reading questions.)		Ctrl+P
Move to the question.		Ctrl+Q
Move to the answer choices.		Ctrl+A
Change how much of the reading passage you can see. (Only enabled on Reading questions.)		Ctrl+S

Operation	Using Buttons	Keyboard Shortcuts
Clear answer choice or response.		Ctrl+Delete
Mark this question for review.		Ctrl+R
Go to the previous question.		Ctrl+Left arrow
Go to the next question.		Ctrl+Right arrow
Go to the question list.		Ctrl+G

The accessibility tools used with the particular accommodated form are available at the top of the screen, and the navigation buttons are located along the bottom of the screen.

Time Limits

For all computer-based tests, testing for a single session must not extend beyond the end of a school day. If a student has been working the length of a typical school day on a session but has not finished, the test administrator will instruct the student to end the test. Students with disabilities who require extended time beyond one school day per session will need to use a paper-based test.

Practice Sessions

Before students can be tested using the computer-based test, they must participate in a practice session to learn how to use the computer-based system (FDOE, 2012a, 2012b). The practice session is designed to prepare students for the testing and will familiarize them with the login system and the process for responding to questions on the computer. Students and school personnel can access CBT practice tests for both the regular test (TestNav) and the accommodated test forms (TestHear) via ePAT links at www.FLAssessments.com/ePATs. Practice session scripts and instructions will also be posted under the Resources tab at www.FLAssessments.com/ePATs. A screenshot of the Web page appears on the next page.

Florida Department of **EDUCATION** PearsonAccess

Home Support Training Center ePAT

Home > ePAT

ePAT

Electronic Practice Assessment Tools

The tools here are intended to support and enhance student preparation for Florida's computer-based assessments. These practice tests provide direct exposure to the format and structure of the items. You can access installation instructions, practice test answers, and practice test scripts under the Resources tab.

Practice Assessment Tools Resources

Practice Assessment Tools

How to Install ePATs

- [How to Install ePATs](#)
- [Install Launcher](#)

TestNav Practice Tests

FCAT 2.0

- [Grade 6 Reading Practice Test-Mac](#)
- [Grade 6 Reading Practice Test-Windows](#)
- [Grade10 Reading Practice Test-Mac](#)
- [Grade 10 Reading Practice Test-Windows](#)
- [FCAT 2.0 Reading Retake Practice Test-Mac](#)
- [FCAT 2.0 Reading Retake Practice Test-Windows](#)

FCAT

- [FCAT Reading and Mathematics Retake Practice Test-Mac](#)
- [FCAT Reading and Mathematics Retake Practice Test-Windows](#)

End-of-Course

- [Algebra 1 EOC Practice Test - Windows](#)
- [Algebra 1 EOC Practice Test - Mac](#)
- [Biology 1 EOC Practice Test - Windows](#)
- [Biology 1 EOC Practice Test - Mac](#)
- [Geometry EOC Practice Test - Windows](#)
- [Geometry EOC Practice Test - Mac](#)
- [US History EOC Practice Test - Windows](#)
- [US History EOC Practice Test - Mac](#)

TestHear (Accommodated) Practice Tests

TestHear ePAT Launcher included in download; runs only on Windows.

FCAT 2.0 (Accommodated) - Installer includes all possible form combinations.

- [FCAT 2.0 Reading Retake Practice Test](#)

FCAT (Accommodated) - Install all applicable form combinations.

- [FCAT Reading & Mathematics Retake Practice Test](#)

End-of-Course (Accommodated) - Install all applicable form combinations.

- [Algebra1 EOC Practice Test](#)

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Screenshot of ePAT Links

Section Two

Accommodations for Computer-Based Testing

Accommodations are changes or adjustments to standard instruction or assessment procedures or materials that enable students with disabilities to participate meaningfully in educational programs. Accommodations in assessment situations are generally the same as the accommodations the student routinely uses in instruction. The accommodations described in this document are specific to the computer-based Grades 6 and 10 FCAT Reading, FCAT Reading Retake, FCAT Mathematics Retake, FCAT 2.0 Reading Retake, Algebra 1 EOC, Geometry EOC, and Biology 1 EOC assessments (FDOE, 2012a, 2012b).

Some students with disabilities may not be able to access the computer-based assessments. Paper-based versions, including regular print and braille, are available for students who require them. These alternate forms must be ordered during the respective PreID window for each assessment.

The student's IEP or Section 504 plan must indicate the accommodations the student needs to take a test on a computer or if the student needs a paper-based version. Accommodations for testing should be the same as those used in instruction and classroom assessment and should not introduce new or special circumstances during testing. The test administrator and the school assessment coordinator are responsible for ensuring that arrangements have been made for accommodations prior to the test administration dates.

Categories of Accommodations

Accommodations described in this document are organized in four categories: presentation, responding, scheduling, and setting.

Presentation—Use specialized formats, including paper-based regular print and braille, sign language, or oral presentation, or other supports to access information

Responding—Respond to questions or prompts on the assessments in alternate modes, including dictation, sign language, or use other response supports

Scheduling—Increase the length of time to complete assessments or change the way the time is organized

Setting—Change the location in which assessments are given or change the conditions of the instruction and assessment setting

Unique Accommodations

Some students with disabilities need unusual or unique accommodations. Unique accommodations generally involve alterations to the test materials, such as fewer items per page. Unique accommodations must be regularly used by the student for classroom instruction and must not alter the underlying content of the assessment. The Commissioner of Education or designee must approve each unique accommodation request in advance and prior to its use. District-level staff must review accommodation requests before they are sent to the FDOE. The request must include a copy of the student's IEP or Section 504 plan and the signatures of the district ESE coordinator and the district assessment coordinator.

Auditory presentation of reading items may be provided for students with both visual and tactile disabilities who are not able to physically access print, large print, or braille materials. The Request for Auditory Presentation of State Reading Assessments must be attached to the Unique Accommodation Request Form along with requested documentation (FDOE, 2010, November 1).

Accommodations Not Allowed on FCAT/FCAT 2.0 and EOC Assessments

Some accommodations used in the classroom are not allowed on FCAT/FCAT 2.0 or EOC assessments, including the computer-based versions. These accommodations are not permitted because they negatively affect the tests' validity and reliability. Examples include the following:

- Reduced number of test questions or answer options
- Oral or sign language presentation or use of a screen reader for passages and items that test reading skills

Evidence of what the student needs to make progress in the curriculum should drive accommodation decisions. If accommodations are recommended for a student for classroom instruction or testing that are not permitted on FCAT/FCAT 2.0 and EOC assessments, the parent must be notified. The parent must give signed consent for the use of those accommodations in the classroom and must acknowledge in writing that they understand the possible future consequences of using accommodations in the classroom that are not permitted on FCAT/FCAT 2.0 or EOC assessments.

Presentation Accommodations

The test items in the computer-based system are displayed on a computer screen using written text and graphics. The student must read the passages and questions on reading tests independently through visual or tactile means. Reading tests may not be presented to the student through sign language, orally, or communicated through a screen reader. However, mathematics and science tests may be provided in these alternate formats. A built-in screen reader is available as an accommodated form in the computer-based system.

Accommodated CBT Forms

Accommodated CBT forms will be provided in the TestHear platform. Students with disabilities may participate in computer-based test administrations using the accommodated forms as indicated on their IEPs or Section 504 plans. Accommodated CBT forms may be included in the category of flexible presentation accommodations for computer-based test administrations and may be provided to students along with other allowable test administration accommodations.

The test administrator is responsible for setting up the specific accommodated form required for individual students in advance of the testing session.

- **Large Print**

A fixed large print font size (18 point) that is an enlargement of the regular type is available for students who require it.

- **Color Contrast**

Options for variable font color and background color offer the capacity to display preselected font and background color combinations on the computer screen.

The color combinations offered are:

- *White text/black background with blue tracking (green highlighter)*
- *Black text/beige background with green tracking (yellow highlighter)*
- *Black text/light green background with yellow tracking (orange highlighter)*

- **Zoom**

The zoom feature allows students to self-select print size and magnification.

Zoom levels are: 1x, 1.25x, 1.5x, 1.75x, 2x, 2.25x, 2.5x, 2.75x, 3x, 3.5x, 4x, 5x, 6x, 7x, 8x, and 10x.

- **Screen Reader**

The screen reader provides a text-to-speech audio presentation of directions, test items, and answer choices for mathematics and science tests.

- **Assistive Devices**

The assistive devices form allows use of computer-based assistive devices with no other accommodated features enabled.

- **Combination Formats**

The accommodated forms are available as single accommodations:

- *Large Print*

- Zoom
- Color Contrast
- Screen Reader
- Assistive Devices

The accommodated forms are combined as follows:

- Large Print + Color Contrast
- Large Print + Screen Reader
- Large Print + Color Contrast + Screen Reader
- Zoom + Color Contrast
- Zoom + Screen Reader
- Zoom + Color Contrast + Screen Reader
- Color Contrast + Screen Reader

The *Spring 2012 End-of-Course Test Administration Manual* and the *Spring 2012 Reading & Mathematics Retake, Grades 6 & 10 Reading Computer-Based Test Administration Manual* (FDOE, 2012a, 2012b) provides a more detailed explanation about the various forms and functionalities for each of the computer-based tests.

Presentation Accommodations for the CBT

- Oral presentation

Oral presentation may be provided for test items and answer choices on mathematics and science tests. Test items may not be reworded, summarized, or simplified. When reading answer choices, the test administrator must be careful not to use voice inflection that might lead a student to the correct/incorrect responses.

A student who requires oral presentation may use the screen reader provided as an accommodated CBT form for mathematics and science tests. Students using the screen reader will need headphones or should be tested in an individual setting to prevent disturbing other students.

- Sign language presentation

Sign language presentation may be provided for all directions and test items and answer choices on mathematics and science tests. Test items may not be reworded, summarized, or simplified. When providing answer choices, the test administrator must be careful not to use language that might lead a student to the correct/incorrect responses.

- An English/sign or sign/English translation dictionary for students who use sign language as their primary means of communication

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The dictionary must be similar to one used in the instructional setting and may not contain definitions of words. The dictionary may contain the sign picture, the word, synonyms, and an index. Use of electronic dictionaries is strictly prohibited and may be cause for test invalidation.

- Test directions that are repeated, clarified, or summarized
- A copy of directions from the test administration script that is read by the test administrator
- Opportunity for the student to demonstrate that they understand the directions, such as by repeating or paraphrasing
- A student may read aloud passages, test items, and answer choices to themselves; this would require use of a device such as a WhisperPhone® or would require that the student be tested in a separate setting so that other students are not disturbed
- Verbal encouragement (e.g., “keep working,” “make sure to answer every question”)

Paper-Based Test Forms

If the accommodation the student needs is not available or cannot be used with the computer-based test, a paper-based version of the test will be provided. Here is a list of considerations for determining whether a student needs a paper-based test.

The student:

- Cannot access assessments on the computer
- Requires an accommodation that cannot be implemented in conjunction with a computer-based administration (e.g., student requires a specialized setting or uses adaptive furniture that cannot accommodate a computer workstation)
- Requires an accommodated CBT form that is not available
- Requires a flexible scheduling/extended time accommodation that requires testing one session over more than one day
- Is hospitalized or homebound (i.e., hospital/homebound)

The following paper-based forms of the test are available for students:

- Regular print

Regular print versions of the tests are available for students who require them.

Hard copies of the reference sheet will be provided for all students participating in mathematics tests. Schools have the option to provide a paper version of the periodic table for science tests.

- Braille

Students who are using a braille version of the test must have a test administrator who is fluent in braille, such as a teacher of the visually impaired. Modified scripts for administration of braille versions are provided with the braille test materials. Students who are visually impaired can have braille reference sheets for the mathematics and science tests if they take an accommodated form of the test on the computer.

- Reading Passage Booklet

Eligible students participating in the computer-based Grades 6 and 10 FCAT 2.0 Reading, FCAT Reading Retake, or FCAT 2.0 Reading Retake may be provided booklets that contain the passages but do not contain the test items. Students who use Reading Passage Booklets respond to test items on the computer.

Using More than One Test Format

If the student uses more than one format in the classroom as an accommodation, then more than one test format can be ordered. An example could be that both a computer-based format AND a paper-based braille format could be ordered for a student. To ensure the accuracy of the transcription of student responses when dealing with more than one format, the test contractor cannot assume the transcription responsibilities in this instance. Please be aware that in situations when more than one test format is ordered, districts would be required to combine the student responses from both formats and transcribe the responses as directed in the Test Administration Manual.

Presentation Accommodations for the Paper-Based Test

- Test directions that are repeated, clarified, or summarized
- A copy of directions from the test administration script that is read by the test administrator
- Opportunity for the student to demonstrate that they understand the directions, such as by repeating or paraphrasing
- Verbal encouragement (e.g., “keep working,” “make sure to answer every question”)
- A straightedge to maintain or enhance visual attention to test items
- Portions of the test masked to direct attention to uncovered items
- Positioning tools, such as a book stand or page holder
- Colored transparencies or overlays
- Test books secured to the work area
- Magnification devices, such as video magnifiers, reading loupes, or hand-held magnifiers

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- A highlighter to mark key phrases or words in directions, items, and passages
An onscreen highlighter is provided for all students in the computer-based testing system. For the regular TestNav CBT forms, the highlighter color is yellow. The TestHear Color Contrast CBT forms provide options for green, yellow, orange, and blue highlighter colors. If students require the use of a different color highlighter or students use multiple colors to differentiate information, they will need a paper-based test in order to use them.

Non-Allowed Presentation Accommodations

- Use of a screen reader, oral presentation, or sign language presentation for reading tests
- English language dictionaries
- Manipulative materials, such as counters, base-10 blocks, clock faces, or geometric shapes

For Braille Materials Only: While the use of manipulatives is not an allowable accommodation, occasionally an item in a **braille** test will require the use of the manipulatives or the test administrator will be required to modify the test materials to give the student a tactile reference. If/when such items occur, test administrators will be provided with instructions prior to the test administration allowing students to use the manipulatives or modified test materials for specific items only.

Responding Accommodations

The computer-based tests include items that require different types of responses. Answers to multiple-choice items are recorded by clicking on the appropriate bubble on the screen or by typing the letter of the answer choice using the keyboard. Numerical answers to gridded-response items on the FCAT Mathematics Retake are recorded by clicking the bubbles in the grid that correspond to each digit or symbol or by using the keyboard to type digits or symbols in the boxes at the top of the grid. Students will enter numerical answers to fill-in items on the EOC assessments using the keyboard. Students may use blank paper in the CBT Work Folder to work out the solutions to problems on the mathematics and science tests. The following responding accommodations may be used:

- Use of an assistive device to indicate test answers
Any student who uses an assistive device to participate in computer-based testing must use the TestHear platform, even if the student does not require an accommodated CBT form. The TestHear platform will allow the use of certain assistive devices with software/drivers included on a whitelist of applications permitted to run in the background during testing. Software included on the whitelist will not interfere with workstation security requirements.

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- Periodic checks by the test administrator to be sure that students are entering answer choices correctly on the computer
- Use of other communication devices to indicate answers

A test administrator or proctor must enter the student's responses on the computer.

- Provide written, signed, or verbal responses to test items

A test administrator or proctor must enter the student's responses on the computer.

- Use of a computer switch to indicate answers
- Use of a pointing device to indicate answers

A test administrator or proctor must enter the student's responses on the computer.

- Use of mathematics grids/guides to organize mathematical computation

The grids or guides the student needs should be provided with the CBT Work Folder.

- Calculator

Any student may request to use a hand-held calculator instead of the built-in calculator, but it must be an approved FCAT/FCAT 2.0 or EOC calculator. This does not need to be listed as an accommodation for the mathematics or science tests.

Students with visual impairments may use large key/large display calculators or talking calculators.

Responding Accommodations for the Paper-Based Test

- Answers entered directly in the test booklet, if a separate answer sheet is used
- Braille responses on a separate answer sheet
- Abacus, geoboard, Graphic Aid for Mathematics, and Math Window®

Students who have visual impairments may use these devices as approved substitutes for paper and pencil computation.

Scheduling Accommodations

The computer-based test must be given in the time frame established by the FDOE. The school district determines the schedule of the specific sessions of the test. Students are expected to complete a session of the test within a certain period of time. Test administrators are required to provide all of the allotted time in each test session and should not end a test session early. FCAT Retakes are untimed. Most computer-based

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test sessions must be completed within one school day. The Grades 6 and 10 FCAT Reading and FCAT 2.0 Reading Retake tests must be conducted over two days.

- Take the test during several brief sessions, allowing frequent breaks during the test sessions

Students who require more than one day to complete a test must use a paper-based version of the test (regular print or braille). The computer-based version does not provide the option to secure sections of the test to ensure that answers from the previous day are not changed and that students do not preview parts of the test to be answered the following day.

- Take the test at a specific time of day that differs from the regularly scheduled time
- Use extended time

Extended time must be provided in accordance with the student's IEP or Section 504 plan. Extended time is not unlimited time; it should align with the accommodation used regularly in the student's classroom instruction and assessments. The student is not required to use all of the extended time that is allowed and may end the testing session prior to the expiration of the extended time.

Setting Accommodations

The setting in which the computer-based test is administered is determined at the district or school level. The computer-based test should be administered in a room that has comfortable seating, good lighting, and sufficient workspace for students using CBT Work Folders and Reading Passage Booklets. The room should be adequately ventilated and free of distractions.

Students must not be able to easily view other students' computer screens. If necessary, use visual blocks (e.g., file folders taped to the sides of computer screens) (FDOE, 2012b, p. 21). The configuration of the computer lab may influence seating arrangements. For example, some students will need additional space around their computer for assistive technology; others may need special lighting (Thompson, Thurlow, Quenemoen, & Lehr, 2002).

If alternate settings are used, procedures for test security must also be followed and precautions taken in order to ensure that the test remains secure.

- Administer the test in a familiar place with a test proctor present and/or by a familiar person who has been appropriately trained to administer the test; procedures for test security must also be followed and precautions taken in order to ensure that the test remains secure

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- Take the test individually or in a small group setting

The small group should be comparable to the normal instruction group size indicated on the student's IEP or Section 504 plan.

- If a student requires use of an accommodation that may disturb other students, test the student in a separate setting
- Provide special lighting

It is important to control glare from overhead lighting or from natural light coming from the windows by using shades or blinds or by adjusting the overhead lighting. Some students require a detachable glare reduction filter or the use of a shade or hood over the monitor to control glare. This is sometimes required for students with visual impairments. Students may need special task lighting on the work area or additional illumination. The monitor should be positioned to the student's preferred distance and height. Students with low vision may need to view the screen from a closer distance (Allan, Bulla, & Goodman, 2003, February).

- Use adaptive or special furniture
- Take the test with special acoustics, such as FM systems, to enhance sound
- Take the test in a special room to decrease visual or auditory distractions if the student requires an accommodation that will disturb other students
- Allow increased or decreased opportunity for movement
- Reduce stimuli (e.g., limit the number of items around the student's computer station)
- Allow the use of white noise (sound machines) or approved music to reduce auditory distractions

Students will need headphones to avoid distracting others.

Assistive Devices

Assistive technology used for presentation and responding is described in the previous sections. Assistive technology typically used by the student in classroom instruction may be used provided the purpose of the testing is not violated. Implementation of assistive devices must ensure that test responses are the independent work of the student. The TestHear platform will allow the use of certain assistive devices with software/drivers to run in the background during testing. Assistive devices must be used with the TestHear platform without the accommodated CBT tools enabled.

Accommodations for Students Who Are English Language Learners

Students with disabilities who are identified as ELLs and are currently receiving services in a program operated in accordance with an approved district ELL plan may also have accommodations approved for ELL students. Many of the allowable accommodations for ELL students are similar to those that students with disabilities use. Those accommodations may include the following:

- Flexible setting

Testing in a separate room with the English for speakers of other languages (ESOL) or heritage language teacher acting as test administrator.

- Flexible scheduling

Taking a session of the test during several brief periods within one school day; however, a session must be completed within one school day.

- Additional time

Using additional time to complete each test section; however, a session of the test must be completed within one school day.

- Assistance in the heritage language

For mathematics and science tests, ELLs may be provided limited assistance from the ESOL or heritage language teacher using the student's heritage language. The teacher may answer student inquiries related to any directions. The teacher may also answer specific questions about a word or phrase that is confusing the student because of limited English proficiency. A student's questions may not be answered in a way that would lead the student to infer the correct answer to an item. Questions of clarification from individual students must be answered on an individual basis.

For reading tests, the ESOL or heritage language teacher may answer student questions about the general test directions in the student's heritage language. The teacher may not read words to the student from the passages and test items and may not answer student questions about the reading passages or test items.

- Approved dictionary

Access to an approved English-to-heritage language and/or heritage language-to-English dictionary, such as those typically used in instructional settings, is allowed. A dictionary with definitions written exclusively in the heritage language or English may not be used. Electronic dictionaries are strictly prohibited and may be cause for invalidation of the test results.

Section Three

Making Decisions about CBT Accommodations

The team developing the IEP or Section 504 plan makes decisions about accommodations for an individual student when they evaluate the impact of the student's disability on participation in instruction and assessment activities in the classroom and the FCAT or EOC assessment. The selection of accommodations must be based on evidence of the needs of the individual student, not solely on the student's exceptionality, educational placement, or grade level. When determining accommodations for computer-based testing, it is important to consider the student's prior experience and familiarity with computer-based programs. All students will need instruction and practice using the CBT system prior to taking the test.

The following guidelines support good decision-making practices and result in the selection of accommodations that provide equitable access during instruction and assessments for students with disabilities.

1. Accommodations should facilitate an accurate demonstration of what the student knows or can do.
2. Accommodations should not provide the student with an unfair advantage or interfere with the validity of the test. Accommodations must not change the underlying skills that the test measures.
3. Accommodations for the FCAT/FCAT 2.0 and EOC must be the same or nearly the same as those the student uses in completing classroom instruction and assessment activities.
4. Accommodations must be necessary for enabling the student to demonstrate knowledge, ability, skill, or mastery (FDOE, 2012a, 2012b).

Effective decision making about appropriate accommodations begins with gathering and reviewing information about the effect of the student's disability and present level of performance in relation to Next Generation Sunshine State Standards and local requirements. The IEP or Section 504 plan team members must determine how the child's disability affects involvement and progress in the general education curriculum.

Most IEP forms have specific places to record accommodations for the classroom and on tests. In addition, accommodations may also be included in sections for Annual Goals, Special Education, Related Services, or Supplementary Aids and Services. Section 504 plans include a place to record required accommodations.

A Process for Decision Making

Decisions about accommodations for an individual student should be made with careful consideration of the following questions:

1) What knowledge and skills does the student need to know and be able to do? How will the knowledge and skills be assessed on the computer-based tests?

To answer this question, the team developing the IEP or Section 504 plan must first consider the knowledge and skills the student is expected to learn. A review of the Next Generation Sunshine State Standards should guide this inquiry. For more detailed information, including the test item specifications for the computer-based tests, use the Florida Department of Education website: <http://fcat.fldoe.org> and the Florida Standards database: <http://www.floridastandards.org>.

In addition to the standards being tested, the planning team should become familiar with the format of the content and questions on the test, the expected types of responses, and state and local policies affecting the setting and schedule of the test. Information about the format and questions is briefly described in this document and in the information issued by the Florida Department of Education. Specific setting and scheduling policies can be obtained from the assessment coordinator in the local school district.

When determining accommodations for the computer-based testing, it is important to consider the student's prior experience and familiarity with computer-based programs (Thompson, Thurlow, & Moore, 2003, Thurlow, Lazarus, Albus, & Hodgson, 2010, September).

Does the student have basic computer skills?

Does the student know how to use a mouse and keyboard, keyboard commands, or an alternative input device? Can the student use the scroll bar?

Has the student had the opportunity to answer test questions on a computer?

Does the student know how to navigate the system to move between questions and review them?

Does the student know how to use electronic tools for eliminating choices, highlighting, erasing, or flagging answers for review?

Has the student had experience using a calculator, straightedge, or notepad on the computer?

Can the student access the exhibits (reference sheets) and move between the items and the reference sheet?

2) How does the disability affect the student's ability to learn the targeted knowledge and skills and perform on the assessments?

The need for accommodations should be based on information obtained from the student's present level of academic achievement and functional performance. In addition, the IEP includes a statement of any appropriate accommodations in the administration of state or district assessments of student achievement that are necessary to measure student performance on the assessments (Rule 6A-6.03028(3)(h), F.A.C.).

For a Section 504 plan, the team considers the impact of the disability that substantially interferes with the student's ability to access school programs. The team determines which accommodations the student needs.

3) What accommodations does the student regularly use in instruction and testing situations? Were these accommodations effective?

Effective accommodations enable students with disabilities to participate in instruction and assessment activities. It is important for the planning team to monitor the impact of accommodations provided in the past. In addition, students should be included in making decisions about accommodations. The team should evaluate the effectiveness of current and future accommodations. A list of sample questions follows:

Does the student become more fatigued when reading text on a computer screen or have difficulty when the entire passage is not visible on the screen at one time?

Can the student easily move between pages on the screen?

Does the student need one of the CBT accommodated forms (large print, variable color contrast, zoom, screen reader, assistive technology)?

Does the student use assistive devices for the computer or an augmentative alternative communication (AAC) device that requires software programs to run in the background?

Is the student able to complete the computer-based test within one school day if breaks are provided?

Does the student actually use the accommodations?

Does the student experience any difficulties when using accommodations?

Should the student continue to use a particular accommodation, are changes needed, or should the use of the accommodation be discontinued?

Can accommodations be combined to increase their impact?

To determine if the student has the basic computer skills necessary to take the test and use the tools or CBT accommodated forms, the teacher may use the Technology Skills Checklist for Computer-Based Testing for FCAT and EOC Assessments or the Technology

Skills Checklist for CBT Accommodated Forms. These checklists are included at the end of this section.

4) What accommodations should be provided for the student for FCAT/FCAT 2.0 and EOC computer-based testing?

Accommodations used on the FCAT/FCAT 2.0 and EOC should be the same or similar to what the student typically uses to learn and perform tasks in the classroom setting. The lists of accommodations in this manual can help answer these questions:

- Does the student need a different type of presentation?
- Does the student need a different way to respond?
- Does the student need a different schedule?
- Does the student need a flexible setting?
- Does the student use assistive technology?

Documentation Requirements

Once accommodations have been selected, notations are made on the student's IEP or Section 504 plan to document the decisions. Accommodations may not legally be provided during FCAT/FCAT 2.0 or EOC testing to any student without an appropriate plan in place (FDOE, 2012a, 2012b). It is important to keep the plan updated as the student's need for and use of accommodations changes over time.

Section Three: Making Decisions about CBT Accommodations

Technology Skills Checklist for Computer-Based Testing for FCAT and EOC Assessments

Student: _____ Teacher: _____ Date: _____

- + Check in this column each skill that the student currently **performs**.
- Check in this column each skill that the student **needs to learn** before taking the assessment.

Basic Computer Skills	+	–
1. Use mouse, keyboard, keyboard commands, and number pad	<input type="checkbox"/>	<input type="checkbox"/>
2. Use scroll bar to move up, down, and across page	<input type="checkbox"/>	<input type="checkbox"/>
3. Use single-click function	<input type="checkbox"/>	<input type="checkbox"/>
Using the Computer-Based Assessment	+	–
1. Type username and password information to log in	<input type="checkbox"/>	<input type="checkbox"/>
2. Use navigation buttons (Back, Next, Go to, Review)	<input type="checkbox"/>	<input type="checkbox"/>
3. Scroll within top box of a split screen	<input type="checkbox"/>	<input type="checkbox"/>
4. Use Selection Tool to select answer choice	<input type="checkbox"/>	<input type="checkbox"/>
5. Use Help icon to demonstrate electronic tools	<input type="checkbox"/>	<input type="checkbox"/>
6. Use Eliminate Choice to cross through incorrect answer	<input type="checkbox"/>	<input type="checkbox"/>
7. Use Highlighter to mark text	<input type="checkbox"/>	<input type="checkbox"/>
8. Use Eraser to remove highlighted text or marks for eliminated choices	<input type="checkbox"/>	<input type="checkbox"/>
9. Use Calculator (select, use, close)	<input type="checkbox"/>	<input type="checkbox"/>
10. Use Straightedge (select, move, rotate, close)	<input type="checkbox"/>	<input type="checkbox"/>
11. Use Exhibit (open reference sheet, use tabs, move, resize, scroll, close)	<input type="checkbox"/>	<input type="checkbox"/>
12. Use Notepad (FCAT 2.0 Reading: open, type notes, move, resize, scroll, close)	<input type="checkbox"/>	<input type="checkbox"/>
13. Use mouse or keyboard to select multiple-choice answer	<input type="checkbox"/>	<input type="checkbox"/>
14. Use keyboard or number pad to type response in fill-in boxes (Algebra 1, Geometry)	<input type="checkbox"/>	<input type="checkbox"/>
15. Use mouse, keyboard, or number pad to select gridded response (FCAT Mathematics Retake)	<input type="checkbox"/>	<input type="checkbox"/>
16. Can Submit answers and Exit the assessment	<input type="checkbox"/>	<input type="checkbox"/>

Observations/Comments:

Technology Skills Checklist for CBT Accommodated Forms

Student: _____ Teacher: _____ Date: _____

The need for the accommodated form is specified on the student's IEP or Section 504 plan. Check the appropriate boxes to indicate if the student **needs** the accommodation and if the student can **use** the accommodated form while testing.

The school assessment coordinator is responsible for assigning the accommodated CBT test forms if the student requires it.

Large Print	Need?	Use?
Read the fixed 18-point font	<input type="checkbox"/>	<input type="checkbox"/>
Color Contrast		
Read with the specified variable font/background color Specify color combination: _____	<input type="checkbox"/>	<input type="checkbox"/>
Zoom		
Use the Zoom feature	<input type="checkbox"/>	<input type="checkbox"/>
Screen Reader		
<i>FCAT Mathematics Retake, and Algebra 1, Geometry, and Biology 1 EOC assessments</i>		
Use the Screen Reader	<input type="checkbox"/>	<input type="checkbox"/>

Assistive Device	Need?	Use?
<i>Students who require the use of an assistive device to participate in computer-based testing must use the TestHear platform without the accommodated CBT tools enabled. Please check for compatibility.</i>		
Use the assistive device with the computer-based test	<input type="checkbox"/>	<input type="checkbox"/>

Observations/Comments:

References

- Allan, J. M., Bulla, N., & Goodman, S. A. (2003, February). *Test access guidelines for computer administered testing*. Louisville, KY: American Printing House for the Blind. Retrieved from <http://www.aph.org/tests/access/index.html>
- Florida Department of Education. (2010, March 12). *Waiver of the Florida Comprehensive Assessment (FCAT) graduation requirement for students with disabilities* [Technical Assistance Paper DPS: 2010-24]. Tallahassee, FL: Author. Retrieved from <http://www.fldoe.org/ese/tap-home.asp>
- Florida Department of Education. (2010, November 1). *Spring 2011 FCAT/FCAT 2.0 and end-of-course unique accommodations requests* [Memorandum]. Tallahassee, FL: Author. Retrieved from <http://www.fldoe.org/asp/k12memo/k12memo-fcat.asp>
- Florida Department of Education. (2011, February). *2011 FCAT 2.0 fact sheet*. Tallahassee, FL: Author. Retrieved from <http://fcat.fldoe.org/fcat2/pdf/ffs2.pdf>
- Florida Department of Education. (2011, July 22). *Transition to next generation and computer-based tests in Florida*. Tallahassee, FL: Author. Retrieved from <http://www.fldoe.org/fcat2/cbt.asp>
- Florida Department of Education. (2012a). *Spring 2012 end-of-course assessments test administration manual*. Tallahassee, FL: Author.
- Florida Department of Education. (2012a). *Spring 2012 reading & mathematics retake, grades 6 & 10 reading computer-based test administration manual*. Tallahassee, FL: Author.
- Florida Department of Education. (2012b). *Spring 2012 end-of-course assessments test administration manual*. Tallahassee, FL: Author.
- Thompson, S., Thurlow, M., & Moore, M. (2003). *Using computer-based tests with students with disabilities* [Policy Directions No. 15]. Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved from <http://education.umn.edu/NCEO/OnlinePubs/Policy15.htm>
- Thompson, S. J., Thurlow, M. L., Quenemoen, R. F., & Lehr, C. A. (2002). *Access to computer-based testing for students with disabilities* [Synthesis Report 45]. Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved from <http://education.umn.edu/NCEO/OnlinePubs/>

[Synthesis45.html](#)

Thurlow, M., Lazarus, S. S., Albus, D., & Hodgson, J. (2010, September). Computer-based testing: Practices and considerations. [Synthesis Report 78]. Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved from <http://www.cedh.umn.edu/NCEO/OnlinePubs/Synthesis78/default.htm> - issues



Florida Department of Education
Gerard Robinson, Commissioner

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